

WHAT IS CLAIMED IS:

1. An artificial bone comprising:

- a substrate material, wherein the substrate material comprises a plurality of closed cells; and

5 - at least one of a suppression component impregnated into at least one of the plurality of closed cells; and an x-ray component dispersed within the substrate material.

2. The artificial bone of claim 1 further comprising each of the suppression component and the x-ray component.

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3. The artificial bone of claim 1 wherein the substrate material comprises a polyurethane material having a plurality of closed cells.

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4. The artificial bone of claim 1 wherein the substrate material comprises one of the group consisting of: polyethylene, polypropylene and polymeric resins.

5. The artificial bone of claim 1 wherein the x-ray component comprises a plurality of barium components.

20 6. The artificial bone of claim 1 wherein the x-ray component comprises approximately 10% by weight of the substrate material.

7. The artificial bone of claim 1 wherein the suppression component comprises a propylene glycol material.

5 8. The artificial bone of claim 1 wherein the suppression component comprises one of the group consisting of: water, ethylene glycol, oils, polar and non-polar solvents, lotions and mixtures thereof.

10 9. A method of manufacturing an artificial bone comprising the steps of:
- providing a substrate base material;
- optionally mixing an x-ray component into the substrate base material;
- curing the substrate base material into a substrate; and
- optionally impregnating the substrate with a suppression component,
wherein at least one of the steps of mixing and impregnating are executed such that the
15 resulting artificial bone includes at least one of the x-ray component and the suppression component.

10. The method of claim 9 wherein the step of impregnating comprises the steps of:
- placing the substrate within an autoclave;
- introducing the suppression component; and
- elevating the pressure within the autoclave for a predetermined period of time.
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11. The method of claim 9 further comprising the step of placing the substrate base material into a mold prior to the step of curing.

5 12. The method of claim 9 further comprising the step of finishing the outer surface of the

substrate after the step of curing.

13. The method of claim 9 wherein each of the steps of mixing and impregnating are executed such that the resulting artificial bone includes each of the x-ray component and the suppression component.

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